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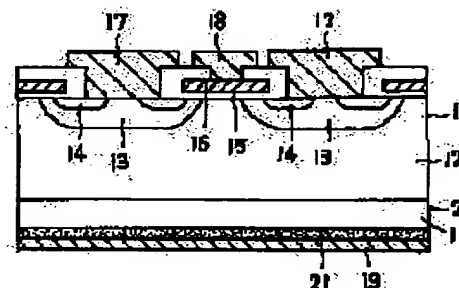
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(54) CONDUCTIVITY-MODULATION SEMICONDUCTOR DEVICE AND ITS MANUFACTURE

(57)Abstract:

PURPOSE: To provide a high-breakdown-strength conductivity-modulation device provided with a new anode structure wherein the trade-off of an ON voltage and a turn-on time can be improved and a stable element characteristic can be obtained and to provide its manufacturing method.

CONSTITUTION: An N-type silicon semiconductor substrate 1 is used as a drain region 12, and an anode region 11 is formed on its surface by vapor growth. In addition, a P+ anode region 21 composed of high-concentration polycrystalline silicon is formed in the anode region 11. An anode electrode 19 is formed on the region 21. Even when a carrier lifetime in the drain region is long, the injection amount of carriers can be suppressed small. In addition, the contact of the anode region with the anode electrode can be improved.



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